

2021

Summary Report

NCDOT

*Measuring Progress of Bicycle and Pedestrian Plans
in North Carolina*



To fulfill the requirements of NCGS 136-41.5



North Carolina Department of Transportation Measuring Progress of Bicycle and Pedestrian Plans 2021 Summary Report

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Executive Summary

The following report summarizes the implementation successes and challenges for bicycle and pedestrian plans adopted since 2011 that were funded by the N.C. Department of Transportation's Bicycle and Pedestrian Planning Grant Program.

Implementation Progress

Local governments have adopted 112 plans since 2011. These plans have generated approximately 250 projects submitted for funding in the State Transportation Improvement Program (STIP) that are evaluated through the Strategic Transportation Investments (STI) program using a data driven approach. An estimated 79 projects recommended through these plans were awarded through the STI process and funded in the 2020-2029 STIP. See below for the status of progress for the 112 adopted plans.

- Thirty-six (36) plans exhibited high implementation progress – indicating ten (10) or more in development or completed projects
- Twenty-five (25) plans exhibited moderate implementation progress – indicating five (5) to nine (9) in development or completed projects
- Twenty-nine (29) plans exhibited low implementation progress – indicating one (1) to four (4) in development or completed projects
- Twenty-two (22) plans did not show any plan implementation progress

In all, 79% of communities reported some level of project implementation (funded, under design, under construction, complete or partially complete). Of the 22 communities reporting no progress, 45% were communities with newly adopted plans completed in 2020.

Community Highlights

Communities across the state show measurable positive impacts as a result of the planning grant program.

- The City of High Point received \$35,000 in 2015 to develop a pedestrian master plan. That investment has resulted in \$24.6 million dollars in pedestrian infrastructure investments.
- The Town of Rolesville received \$28,000 in 2011 to develop a bicycle master plan. That investment has resulted in \$7.6 million dollars in bicycle infrastructure investments.
- The Town of Mount Airy received \$22,050 in 2011 to develop a pedestrian plan. That investment has resulted in \$6 million dollars in pedestrian infrastructure investments.

Barriers to Implementation

The communities participating in this effort identified barriers to project implementation. The most common responses were:

- Lack of funding, which is particularly burdensome on rural areas of Western and Eastern North Carolina
- Limited staff
- Right of way limitations
- Other barriers include coordination between partner agencies, utility relocation and project feasibility

Introduction

Legislative Mandate

In 2017, the N.C. General Assembly passed a provision requiring that NCDOT's Integrated Mobility Division (IMD) submit an "annual report by May 15 on the progress of projects identified in plans (i) submitted to the Division over the 10-year period prior to the report and (ii) funded from Bicycle and Pedestrian Planning Grant funds." This report documents a review of bicycle and pedestrian plans adopted over the last 10 years.

About the Planning Grant Program

In 2004, the department established the Bicycle and Pedestrian Planning Grant Initiative to encourage municipalities to develop comprehensive bicycle and pedestrian transportation plans. To date, approximately \$7.0 million dollars in federal planning and research funds have supported the development of 232 plans. IMD awards grants on an annual basis through a call for applications that considers need, project scope, level of local support and geographic distribution.

Plans Subject to Evaluation

One hundred twelve adopted plans received funding from the Bicycle and Pedestrian Planning Grant program within the last 10 years. Some communities completed both a pedestrian and bicycle plan, resulting in 103 individual communities developing 112 plans. Of the 112 plans:

- 28 are bicycle plans;
- 54 are pedestrian plans;
- 30 are combined bicycle and pedestrian plans.

Evaluation Process

In January-March 2021, IMD asked communities to document progress for each project identified in their adopted plans. Of the 112 adopted plans, IMD received responses for 79 plans representing 77 individual communities. For the 26 communities that did not respond to the survey, the department used their responses from previous years' surveys and included in this report, if available (similar surveys occurred in 2018, 2019, and 2020).

The following is a final breakdown of the adopted plans by community size:

- 89 are in a rural setting (population of 15,000 or less);
- 15 are in a suburban setting (population between 15,000 and 50,000);
- 8 are in an urban setting (population of 50,000 or more).

This year, survey participation rates declined compared to previous years. The department believes the lower response rate is due to communication challenges brought on by COVID-19 work from home practices such as the use of personal phone numbers, local staff turnover/departures, and increased difficulty in identifying accurate contact information on municipal websites. When available, data from previous surveys was used as a stand-in for missing community data in the 2021 survey.

Background

In 2017, the N.C. General Assembly passed a provision requiring that NCDOT’s Integrated Mobility Division (IMD) submit an “annual report by May 15 on the progress of projects identified in plans (i) submitted to the Division over the 10-year period prior to the report and (ii) funded from Bicycle and Pedestrian Planning Grant funds.”

While this report’s primary purpose is to meet legislative requirements, the process has helped NCDOT effectively monitor project implementation, identify opportunities for program refinement, and categorize barriers that inhibit project implementation.

One hundred twelve adopted plans within the last 10 years received funding from the Bicycle and Pedestrian Planning Grant program. Of these 112 plans, 28 are bicycle plans, 54 are pedestrian plans and 30 are combined bicycle and pedestrian plans. Since some communities completed both a pedestrian and bicycle plan in different award years, 103 individual communities developed these 112 plans.

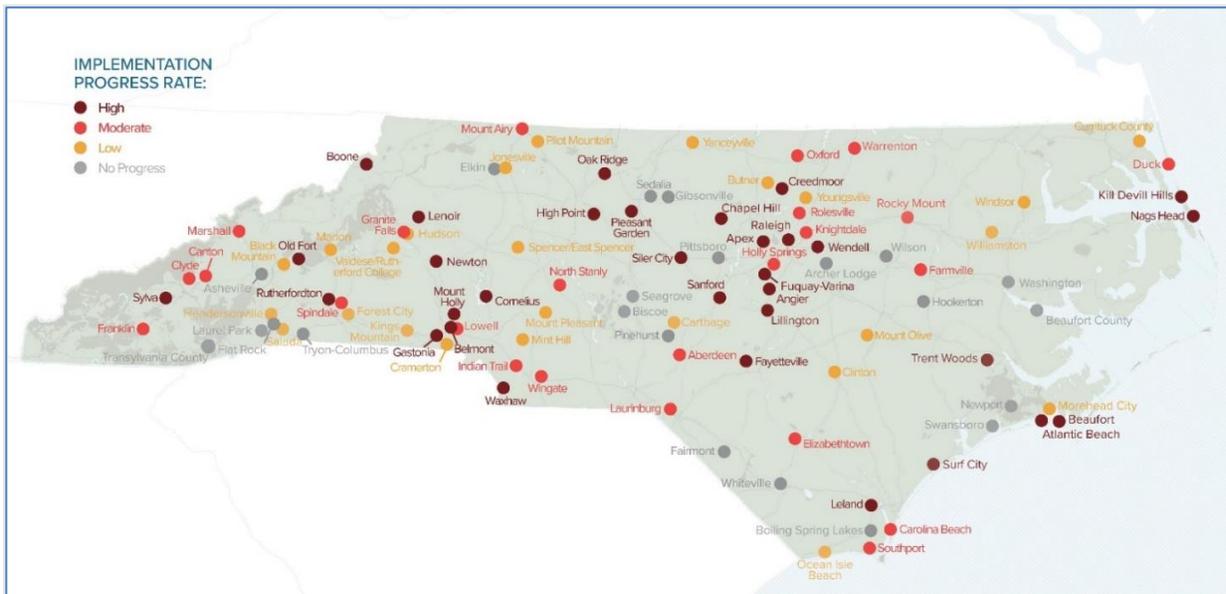
Methodology

In January 2021, NCDOT contacted each of the 103 communities to inform them of the project and schedule. The department asked each community to complete an online survey and provided each a project list consisting of priority projects noted in the adopted plan. Respondents identified project implementation status (funded, under design, under construction, complete or partially complete), non-infrastructure progress, funding strategies and barriers to implementation.

NCDOT staff made multiple communication efforts to each of the 103 communities between January and March, including email correspondence and phone calls. MPO/RPO staff assisted in outreach and communication to communities.

Of the 112 adopted plans, 77 individual communities completed 79 surveys in 2021 .

Figure 1: Map of Planning Grant Recipients – Implementation Rate



Implementation Progress

IMD determined implementation progress by totaling the number of projects documented in adopted plans reported to be completed or under development (demonstrating implementation progress). IMD defined any project identified as funded, under design, under construction, complete, or partially complete as having implementation progress for this analysis. The division assigned a level of implementation progress to each of the 112 adopted plans using the following scale:

- High Implementation Progress includes 10 or more projects under development;
- Moderate Implementation Progress includes 5 to 9 projects under development;
- Low Implementation Progress includes 1 to 4 projects under development;
- No Progress includes any plan that identified every project as unfunded.

Projects Completed or In Development

This study identified 1,458 bicycle and pedestrian projects with implementation progress in 86 communities that come directly from an adopted plan funded through the Bicycle and Pedestrian Planning Grant Initiative program. Types of projects vary, but generally fall within the following categories:

- Intersection improvements (crosswalks, pedestrian signals and ADA compliant curb ramps);
- New sidewalks;
- Sidewalk repairs;
- Shared use paths;
- Bicycle lanes.

The total number of recommended projects in each plan vary drastically, with some having as few as 6 recommendations and others having more than 200. The scope of recommendations also varies significantly from plan to plan. Together these factors impact the level of implementation progress.

For instance:

- Chapel Hill's bicycle plan has 18 high-level project and comprehensive recommendations (bicycle lanes, shared use path corridors, intersection improvements, etc.), with 16 having recorded progress.
- Raleigh's pedestrian plan has 226 itemized project recommendations (crosswalk installation, curb ramp improvements, etc.), with 166 having recorded progress.

High Implementation Progress

Thirty-six plans achieved a high level of implementation progress. Plans are shown in alphabetical order.

Table 1: Communities with High Implementation Progress (10 or more projects)

Community Name	Plan Type	Year Adopted	# of Recommended Projects	# of Projects Completed or Under Development [^]
Angier	Pedestrian	2014	23	13
Apex	Bicycle	2019	51	16
Atlantic Beach	Bicycle	2012	58	16
Beaufort	Bicycle and Pedestrian	2020	78	99
Belmont	Bicycle	2013	78	41
Boone†	Bicycle and Pedestrian	2011 and 2014	79	42
Chapel Hill	Bicycle	2014	18	14
*Cornelius†	Bicycle and Pedestrian	2012 and 2017	252	130
*Creedmoor	Pedestrian	2011	46	10
Fayetteville†	Bicycle and Pedestrian	2018 and 2020	353	52
Fuquay-Varina	Pedestrian	2013	116	36
Gastonia	Pedestrian	2014	186	60
High Point	Pedestrian	2017	179	16
Kill Devil Hills	Pedestrian	2012	40	30
Leland	Pedestrian	2016	86	10
*Lenoir	Pedestrian	2012	84	22
*Lenoir	Bicycle	2018	41	15
Lillington	Bicycle and Pedestrian	2020	64	16
*Mount Holly	Pedestrian	2013	88	15
Mount Holly	Bicycle	2019	55	28
*Newton	Pedestrian	2017	143	13
Oak Ridge	Pedestrian	2013	30	11
*Old Fort	Pedestrian	2011	16	18
Pleasant Garden	Bicycle and Pedestrian	2015	35	37
*Raleigh	Pedestrian	2013	226	166
Rutherfordton	Bicycle and Pedestrian	2017	12	10
Sanford	Bicycle	2014	31	11
Siler City	Pedestrian	2013	22	22
Surf City	Bicycle and Pedestrian	2016	85	102
Sylva	Pedestrian	2011	24	18
Trent Woods	Pedestrian	2014	36	16
Waxhaw	Pedestrian	2012	26	14
Wendell	Pedestrian	2018	94	77

*Community did not respond to survey in 2021. This data point is based on historic reporting from the community.

†Community completed one survey for two funded plans.

[^] May include projects that closely align with the goals and strategies of the plan but were not specifically listed as a recommendation at the time the plan was finalized.

Moderate Implementation Progress

Twenty-five plans achieved a moderate level of implementation progress. Plans are shown in alphabetical order.

Table 2: Communities with Moderate Implementation Progress (5-9 Projects)

Community Name	Plan Type	Year Adopted	# of Recommended Projects	# of Projects Completed or Under Development
Aberdeen	Pedestrian	2011	13	7
*Canton	Bicycle and Pedestrian	2019	68	6
*Carolina Beach	Bicycle	2011	54	6
Clyde	Pedestrian	2012	46	5
Duck	Pedestrian	2014	13	9
*Elizabethtown	Pedestrian	2013	38	8
Farmville	Pedestrian	2014	32	5
Franklin	Bicycle and Pedestrian	2017	22	9
Granite Falls	Pedestrian	2011	32	8
Holly Springs	Bicycle	2011	64	8
Indian Trail	Bicycle	2011	125	7
Knightdale	Pedestrian	2013	40	9
Laurinburg	Pedestrian	2015	106	6
Lowell	Bicycle and Pedestrian	2020	12	5
Marshall	Pedestrian	2013	22	7
Mount Airy	Pedestrian	2013	58	5
Nags Head	Pedestrian	2014	23	9
*North Stanly	Bicycle and Pedestrian	2018	12	7
Oxford	Pedestrian	2012	38	7
Rocky Mount	Pedestrian	2018	116	5
*Rolesville	Bicycle	2013	17	8
*Southport	Pedestrian	2014	25	5
*Spindale	Bicycle and Pedestrian	2019	40	8
Warrenton	Pedestrian	2020	47	5
*Wingate	Pedestrian	2013	76	8

*Community did not respond to survey in 2021. This data point is based on historic reporting from the community.

Low Implementation Progress

Twenty-nine plans achieved a low level of implementation progress. Plans are shown in alphabetical order.

Table3: Communities with Low Implementation Progress (1-4 Projects)

Community Name	Plan Type	Year Adopted	# of Recommended Projects	# of Projects Completed or Under Development
*Black Mountain	Bicycle	2016	21	4
Butner	Pedestrian	2011	18	3
*Carolina Beach	Pedestrian	2018	38	1
Carthage	Bicycle and Pedestrian	2018	35	2
Clinton†	Bicycle and Pedestrian	2012 and 2015	119	1
Cramerton	Bicycle	2018	12	1
Currituck County	Pedestrian	2018	104	3
*Elizabethtown	Bicycle	2015	24	2
Forest City	Pedestrian	2016	39	2
*Hendersonville	Bicycle	2017	14	1
Hudson	Bicycle and Pedestrian	2020	35	4
Jonesville	Pedestrian	2015	42	3
*Kings Mountain	Bicycle	2011	91	2
*Kings Mountain	Pedestrian	2014	153	1
Marion	Bicycle	2016	22	2
Mint Hill	Pedestrian	2011	164	1
Morehead City	Pedestrian	2011	99	1
Mount Olive	Bicycle and Pedestrian	2019	57	4
Mount Pleasant	Bicycle and Pedestrian	2020	17	2
Ocean Isle Beach	Bicycle and Pedestrian	2014	16	2
Pilot Mountain	Pedestrian	2013	43	3
Saluda	Bicycle and Pedestrian	2016	34	1
Spencer	Bicycle and Pedestrian	2016	105	3
Valdese/Rutherford College	Pedestrian	2016	20	4
Williamston	Pedestrian	2012	56	1
*Windsor	Bicycle and Pedestrian	2018	84	2
Yanceyville	Pedestrian	2011	6	2
Youngsville	Pedestrian	2015	16	2

*Community did not respond to survey in 2021. This data point is based on historic reporting from the community.

†Community completed one survey for two funded plans.

No Progress

Twenty-two plans have not had any projects implemented since their adoption. Fourteen of these communities have submitted projects through the State’s Strategic Prioritization Process (STI), including 41 projects submitted in the most recent round of prioritization (P6.0). Plans are shown in alphabetical order.

Table 4: Communities with No Implementation Progress (0 Projects)

Community Name	Plan Type	Year Adopted	# of Recommended Projects
*Archer Lodge	Bicycle and Pedestrian	2020	7
*Asheville	Bicycle and Pedestrian	2020	7
*Beaufort County	Bicycle	2020	73
*Biscoe	Pedestrian	2011	33
Boiling Spring Lakes	Pedestrian	2020	14
Elkin	Bicycle and Pedestrian	2020	19
Fairmont	Bicycle and Pedestrian	2017	24
*Flat Rock	Bicycle and Pedestrian	2020	10
Gibsonville	Bicycle	2020	26
Hookerton	Bicycle and Pedestrian	2015	67
*Laurel Park	Bicycle and Pedestrian	2018	10
Newport	Bicycle and Pedestrian	2017	17
Pinehurst	Bicycle	2015	12
*Pittsboro	Bicycle and Pedestrian	2020	12
*Seagrove	Pedestrian	2019	31
Sedalia	Bicycle and Pedestrian	2015	38
Swansboro	Bicycle	2011	10
Transylvania County	Bicycle	2019	16
*Tryon/Columbus	Bicycle and Pedestrian	2020	43
Washington	Bicycle	2014	32
Whiteville	Pedestrian	2014	87
Wilson	Pedestrian	2020	45

*Community did not respond to survey in 2021. This data point is based on historic reporting from the community, if available.

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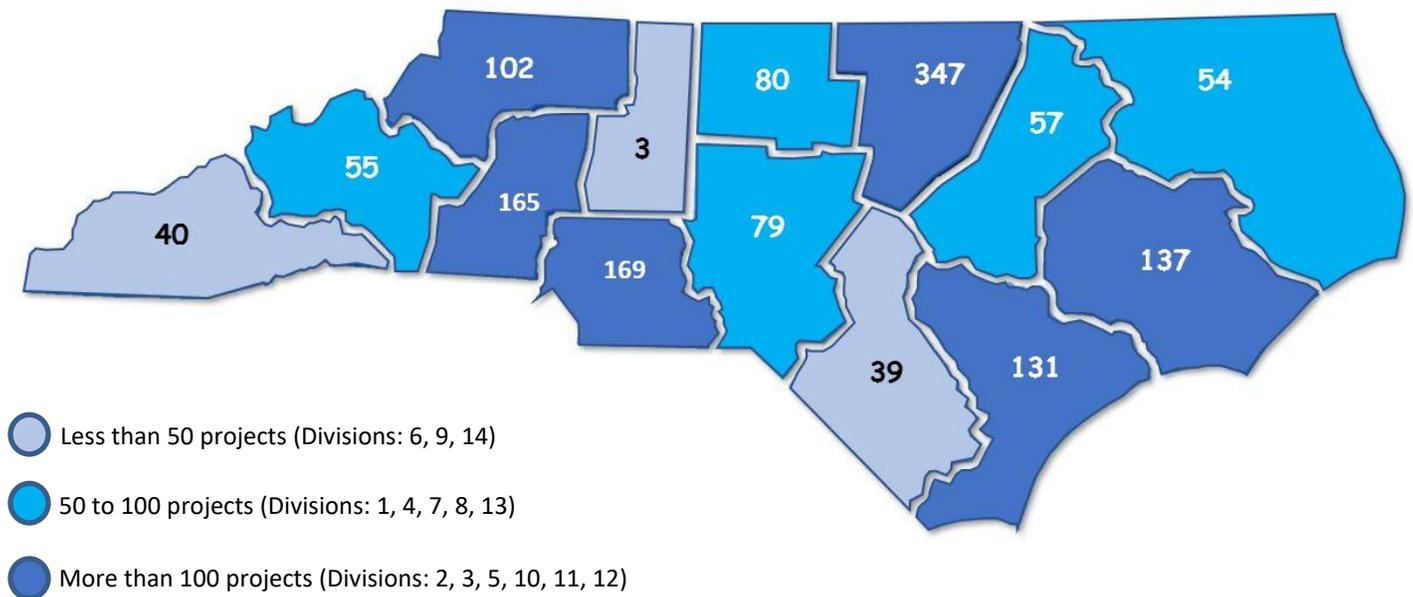
NCDOT Highway Division Breakdown

Below is a breakdown of the number of bicycle and/or pedestrian plans under development in each NCDOT Highway Division, along with the number of projects implemented. The map below illustrates the data by division.

Table 5: NCDOT Highway Divisions – Projects Under Development

NCDOT Highway Divisions	# of Plans Adopted	# of Total Projects with Implementation Progress
1	6	54
2	9	137
3	11	131
4	4	57
5	12	347
6	7	39
7	7	80
8	9	79
9	1	3
10	8	169
11	10	102
12	9	165
13	9	55
14	10	40

Figure 2: NCDOT Highway Divisions – Projects Under Development



Influence of Plan Adoption & Award Date

Plans reviewed for this report were adopted over a 10-year span. The timeframe of plan award and adoption impact implementation progress.

- Plans adopted between 2011 and 2015 have higher rates of implementation progress than plans adopted between 2016 and 2020.
- The average plan adoption date for those with High and Moderate implementation progress is 2014. The average plan adoption date for plans with Low and No implementation progress is 2015.
- Plans awarded after 2015 may have not had enough time to process specific project funding requests, both locally and with the respective MPO/RPO.
- According to survey responses, the COVID-19 pandemic has negatively impacted communities' communication and collaboration with their respective MPOs /RPOs in settings such as board meetings, public forums, etc.

Barriers to Implementation

Communities were asked to identify barriers to implementation for each unfunded recommendation to better understand why some adopted recommendations have not been implemented.

The following primary barriers were identified and are listed in order of importance.

- Lack of funding
- Limited staff
- Right of way limitations
- Utility relocation
- Lack of coordination between partner agencies
- Project feasibility
- Other
- Environmental constraints
- Inaccurate cost estimates

“Lack of funding is our main challenge, but the Town is always looking for additional funding opportunities for implementation of bicycle and pedestrian improvement projects.”

~ Town of Cornelius

Programs and Policies

Communities were asked to identify programs and policies implemented from plan recommendations. Forty-eight communities implemented bicycle and pedestrian programs, and 68 communities implemented bicycle and pedestrian-focused policies.

Types of programs implemented vary, but generally fall within the following categories.

- Other responsive programs
- Safe Routes to School Program
- Bicycle and Pedestrian Wayfinding and Maps
- Watch for Me NC
- Walk to School Day
- NCDOT Bike Helmet Initiative
- Bicycle & Pedestrian Advisory Committee
- Bike Rodeos
- Traffic Enforcement
- Bike to School Day
- Bike Month Activities
- Open Streets Events
- Bicycle and Pedestrian Safety Education/Let's Go NC! Curriculum
- Bike Share Program
- Bicycle Friendly Community Designation

The most frequently adopted policies identified in plan recommendations are.

- Land Use Development Policies that Encourage Walkability and/or Bikeability
- Comprehensive Plan Update
- Unified Development Ordinances Updates for Bicycle and Pedestrian Facilities
- Bicycle & Pedestrian Design Guidelines and/or Design Manual Revisions
- Other
- Complete Streets Policy

Additional Considerations

Communities implement bicycle and pedestrian improvements through a range of project types, including resurfacing projects and other incidental opportunities that are not always captured in adopted plans. This makes it difficult to judge progress toward implementing bicycle and pedestrian facilities solely on plan recommendations. Inventorying completed projects by facility type may provide a more comprehensive perspective on implementation rates and overall benefits of greater multimodal connectivity.

Industry standards for bicycle and pedestrian planning have evolved over the past decade, with trends toward more action-oriented planning documents. In response, IMD recently launched Project Acceleration Plans that are likely to result in higher implementation rates moving forward. Smaller, rural communities will especially benefit from these plans that focus on prioritizing projects and identifying resources to assist with delivery.

Lack of funding continues to be the primary barrier to project implementation, and funding constraints disproportionately impact rural communities. Rural communities often have limited financial capacity to match federal dollars and are more heavily reliant upon the NCDOT STIP and Powell Bill Program to fund bicycle and pedestrian infrastructure. Without the ability to use state transportation funds to match federal funds for bicycle and pedestrian projects, rural communities do not have access to many of the funding sources available to urban and suburban communities with greater financial capacity. As demonstrated in this report, areas with the highest rates of implementation tend to be urban communities, and communities with the lowest implementation rates are those in rural areas of Western and Mid-Eastern North Carolina.

“Even during COVID-19, our community has continued to fund and implement elements of our Bike/Ped plan and our CIP has even more projects scheduled for this budget year.”

~ Town of Beaufort
